

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: August 21, 1996
Date Received: August 15, 1996
Project: Metro Self Monitor, PO #M54226
Date Samples Extracted: August 16, 1996
Date Extracts Analyzed: August 20, 1996

**RESULTS FROM THE ANALYSIS OF THE PROCESS WATER SAMPLE
FOR CHROMIUM, COPPER, NICKEL, AND ZINC**

USING METHOD 6010

Samples Processed Using Method 3005A

Results Reported as mg/L (ppm)

<u>Sample ID</u>	<u>Chromium</u>	<u>Copper</u>	<u>Nickel</u>	<u>Zinc</u>
M54226	0.22	0.23	0.19	<0.05
Method Blank	<0.05	<0.05	<0.05	<0.05

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QUALITY ASSURANCE RESULTS FOR TOTAL METALS BY INDUCTIVELY COUPLED PLASMA (ICP) (METHOD 6010)

Laboratory Code: 71643 (Duplicate)

Analyte:	Reporting Units	Sample Result	Duplicate Result	Relative Percent Difference	Acceptance Criteria
Chromium	mg/L (ppm)	0.22	0.23	4	0-20
Copper	mg/L (ppm)	0.23	0.23	0	0-20
Nickel	mg/L (ppm)	0.19	0.20	5	0-20
Zinc	mg/L (ppm)	<0.05	<0.05	nm	0-20

Laboratory Code: 71643 (Matrix Spike)

Analyte:	Reporting Units	Spike Level	Sample Result	% Recovery MS	MSD	Acceptance Criteria	Relative Percent Difference
Chromium	mg/L (ppm)	5	0.22	97	100	80-120	3
Copper	mg/L (ppm)	5	0.23	95	97	80-120	2
Nickel	mg/L (ppm)	10	0.19	94	96	80-120	2
Zinc	mg/L (ppm)	5	<0.05	94	97	80-120	3

Laboratory Code: Spike Blank

Analyte:	Reporting Units	Spike Level	% Recovery MS	MSD	Acceptance Criteria	Relative Percent Difference
Chromium	mg/L (ppm)	5	101	103	80-120	2
Copper	mg/L (ppm)	5	97	97	80-120	0
Nickel	mg/L (ppm)	10	99	100	80-120	1
Zinc	mg/L (ppm)	5	99	100	80-120	1

nm - The analyte was not detected in one or more of the duplicate analyses. Therefore, calculation of the RPD is not applicable.

KNJ AD
8-15-96
2:45pm

AKC-001206C

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

James E. Bruya, Ph.D
Beth M. Albertson, M.S.
Bradley T. Benson
Kelley D. Wilt

3012 16th Avenue West
Seattle, WA 98119-2029
TEL: (206) 285-8282
FAX: (206) 283-5044

August 21, 1996

**INVOICE # 96ACU0821-2
DUPLICATE COPY**

Accounts Payable
Alaskan Copper Works
628 South Hanford
Seattle, WA 98134

**RE: Project Metro Self Monitor, PO #M54226: Results of testing requested by
Gerry Thompson, Project Manager for material submitted on August 15,
1996.**

**1 process water sample analyzed for
Chromium, Copper, Nickel, and Zinc
using Method 6010 @ \$65 per sample**

\$ 65.00

Amount Due

\$ 65.00

FRIEDMAN & BRUYA, INC.

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FAX: (206) 283-5044

August 21, 1996

**Gerry Thompson, Project Manager
Alaskan Copper Works
628 South Hanford
Seattle, WA 98134**

Dear Mr. Thompson:

**Enclosed are the results from the testing of material submitted on August 15, 1996
from your Metro Self Monitor, PO #M54226 project.**

**We appreciate this opportunity to be of service to you and hope you will call if you
should have any questions.**

Sincerely,

FRIEDMAN & BRUYA, INC.

A handwritten signature in black ink, appearing to read 'Kurt Johnson', with a stylized flourish extending to the right.

**Kurt Johnson
Chemist**

**keh
Enclosures
ACU0821R.DOC**